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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/647,129	11/27/2000	Dieter Dohring	TURKP0114US	4043

7590 02/13/2003

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EXAMINER

TSOY, ELENA

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 02/13/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/647,129

Applicant(s)

DOHRING, DIETER

Examiner

Elena Tsoy

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 23, 2002 has been entered.

Response to Amendment

2. Amendment filed on December 23, 2002 has been entered. Claims 6, 9-11 have been cancelled. Claims 1-5, 7, 8 are pending in the application.

Specification

3. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables

Art Unit: 1762

having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

4. The disclosure is objected to because of the following informalities: language of claim 1 on page 2, line 22 and language of dependent claims on page 2, line 25, should be incorporated into the specification since claims are subject to changes.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1, 3, 4, 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Michl (US 3,135,643) in view of Hoover et al (US 2,958,593).

As to claims 1, 3, Michl discloses a method of impregnating paper used for the production of wear-resistant laminate material (See column 1, lines 20-24; column 10, lines 71-

Art Unit: 1762

75) comprising: a) taking print paper 12 (See Fig. 3; column 6, lines 16-27); b) damping and impregnating the paper 12 with melamine resin (See column 3, lines 65-67; column 5, lines 58-59) by the use of nip rolls 3, 4 to remove the resin in excess of 33-42 % resin content (See Fig. 1; column 5, lines 64-66), and c) additionally coating onto said damped wet print paper an additional layer of coating resin composition comprising 100 parts of melamine resin (See column 5, lines 16-19, 67-69) and 5-30 parts of the abrasive substance (See column 3, lines 33-42, 67-70; column 12, lines 1-3) using a knife coater (See column 5, lines 67-70); wherein dry resin content of the impregnated print paper is 33-42 % (See column 5, lines 60-61) and the weight of dry coating is about 0.022-0.033 pound per square foot of the impregnated paper (See column 6, lines 1-3). Considering the fact that a surface weight (density) of print paper 12 used for impregnating with a resin usually is of about 80g/m^2 , as evidenced by Lindgren et al (See US 5,034,272, column 4, lines 21-27), final area density amounts to about 201 % since a surface weight (density) of dry coating is 0.022 pound per square foot (107 g/m^2) and a surface weight (density) of dry impregnated paper is $40 \times 1.42 = 56\text{ g/m}^2$.

It is the Examiner's position that the nip rolls 3, 4 for removing the excess of resin are in fact metering rollers, as evidenced by Varnell et al (US 5,142,151, Fig. 16; column 9, lines 64-68).

Michl fails to teach that: the step c) is carried out by spraying instead of knife coater; and the amino resin dispersion further comprises flow-promoting agent (Claim 1) such as polyglycol ether (Claim 4).

Hoover et al teach that uniform distribution of abrasive particles on the surface of a non-woven web (See column 6, lines 47-48) can be achieved by spraying a dispersion of abrasive

Art Unit: 1762

particles in amino-containing resin with adjusted viscosity through nozzles while agitating the dispersion in a tank. The viscosity of the dispersion can be adjusted by addition of a flow-promoting agent such as polyglycol ether. See column 5, lines 24-40, 46-55; column 6, lines 31-46.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a flow-promoting agent such as polyglycol ether to an amino resin for adjusting the viscosity of the amino resin and sprayed the formed amino resin to a print paper of Michl with the expectation of achieving uniform distribution of abrasive particles on the surface of the print paper, as taught by Hoover et al.

As to intended use of the paper laminate, it is held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Therefore, the claimed invention is not patentably distinguish over method of Michl in view of Hoover et al since there is no manipulative difference between the method of Michl in view of Hoover et al and that of the claimed invention.

As to claim 8, Michl further teaches that the impregnated paper coated with the dispersion containing the abrasive substance is pressed to form a panel (See column 3, lines 67-75; column 4, 1-2).

Art Unit: 1762

9. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Michl (US 3,135,643) in view of Hoover et al (US 2,958,593), as applied above, and further in view of O'Dell et al (US 5,344,704).

Michl in view of Hoover et al, as applied above, fails to teach that the coating resin composition further comprises 0.5-2.5 parts of silane adhesion promoter, 0.1-0.4 parts of a wetting agent, 0.05-0.4 parts of a separating agent and an amino resin hardener; and the flow-promoting agent is used in an amount of 5-25 parts.

O'Dell et al teach that according to a conventional practice, a protective coating composition comprising a dispersion of abrasive particles (See column 4, lines 26-36) is formulated with various conventional additives such as silane adhesion promoter for improving adhesion of the abrasive particles (See column 6, lines 11-15), a small amount of a wetting agent, humectant, mold release agent (a separating agent) and a catalyst (See column 6, lines 3-10) such as Nacure 3525 melamine resin curing catalyst (hardener) depending on intended use of a final coating composition (See column 10, line 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used conventional additives such as silane adhesion promoter, a wetting agent, humectant, mold release agent (a separating agent) and a resin curing catalyst (hardener) in a melamine resin composition of Michl in view of Hoover et al with the expectation of achieving benefits such as improved adhesion, better mold release and wetting, accelerated cure, etc., as taught by O'Dell et al.

The amounts of the conventional additives (the silane adhesion promoter, the flow-promoting agent, the wetting agent, the separating agent and the amino resin hardener) added to

Art Unit: 1762

a resin composition would affect properties of the resin composition, i.e. the additive amounts are result-effective variables.

It is held that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Also, it is held that concentration limitations are obvious absent a showing of criticality. Akzo v. E.I. du Pont de Nemours 1 USPQ 2d 1704 (Fed. Cir. 1987).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have discovered by routine experimentation the optimum amount of additives (including claimed amounts) in a melamine resin composition of Michl in view of Hoover et al depending on intended use of a final product, since general conditions are taught by O'Dell et al.

10. **Claims 5, 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Michl (US 3,135,643) in view of Hoover et al (US 2,958,593), as applied above, and further in view of Lindgren et al (US 5,034,272).

Michl in view of Hoover et al fails to teach that abrasive substance comprises: at least one of aluminum oxide and silicon carbide having a mean particle size of 60-160 microns (Claim 5), or a mixture of silicon carbide and aluminum oxide (Claim 7).

Lindgren et al teach that abrasive particles such as silica, aluminum oxide and/or silicon carbide or a mixture of two or more are suitable in a method of making a wear-resistant paper laminate under heat and pressure (See column 3, lines 19-50). In other words, silica abrasive particle is functionally equivalent to silicon carbide and/or aluminum oxide.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used silicon carbide or aluminum oxide or a mixture thereof instead of silica in Michl in view of Hoover et al since silicon carbide and/or aluminum oxide is functionally equivalent to silica, as shown by Lindgren et al, and the selection of any of these known abrasive particles would be within the level of ordinary skill in the art.

As to particle size being of 60-160 microns, Michl further teach that the maximum particle size of the silica is limited by processing rather than product considerations: the larger particle size results in higher abrasion resistance but at the same time abrades press pans of the laminating press (See column 9, lines 73-75; column 10, lines 1-12), i.e. the particle size of the silica is a result-effective variable. Lindgren et al also teach that the particle size of the abrasive particles is a result-effective variable: if abrasive particles are too big the surface of the laminate is rough and unpleasant, while too small particles give too low abrasion resistance so that the average particle size should be in the range of 1-80 microns (See column 3, lines 30-35).

It is held that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have discovered the optimum or workable ranges of the particle size of the silica (including 1-80 microns of Lindgren et al or claimed 60-160 microns) in a method of Michl in view of Hoover et al by routine experimentation depending on intended use of a final product since general conditions are taught by Michl and Lindgren et al.

Response to Arguments

11. Applicant's arguments with respect to claims 1-5, 7, 8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (703) 605-1171. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Elena Tsoy

Elena Tsoy
Examiner
Art Unit 1762

February 7, 2003